

10.—*Sulphuret of Molybdenum.*

This was put into my hands by a mercantile house in Calcutta, without however noticing whence it came.

It resembled graphite or plumbago so exactly in its qualities of drawing traces on paper, of being unaltered in the fire, and very gradually disappearing, that I should have been contented with these appearances, had not its specific gravity, 4·64 to 4·5, been so much higher than that of graphite, (1·4.) When heated also, white fumes, devoid of smell, or slightly sulphurous, were perceived at the moment of withdrawal from the fire.

It was digested with disengagement of red fumes in nitric acid; leaving a white insoluble precipitate in the filter, weighing 74·4 per cent. The liquid gave immediate evidence of sulphuric acid, that had been formed from the sulphur present. The white mass acted in all respects like molybdic acid, and was known to be so from its peculiar property of turning instantly blue on contact with metallic iron, lead, copper, or silver: a fact, I believe, not hitherto noticed: water is required to produce this effect. Heated red with carbonate of soda, the metal was reduced with effervescence.

I am not aware that this singular mineral is turned to any profit, but it is desirable to ascertain where it has been discovered. The high specific gravity of the Ceylon graphite, 2·37, leads me to imagine that I may have mistaken that mineral also, and invites further inquiry. It may be remembered\*, that in an English cabinet of minerals, a metallic ore was also found substituted for the true Borrowdale plumbago.

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IX.—*Horary Meteorological Register for Calcutta.* By JAS. PRINSEP,  
*Sec. &c.*

The 21st September having been appointed one of the days for the combined series of horary observations, by the Meteorological Association, I could not allow it to pass without an attempt to fulfil the prescribed terms, even at the sacrifice of a night's rest.

The weather was not very favorable, although such as might be expected near the equinox: the barometer was gradually falling, indicative of blowing weather; which in fact followed a few days afterwards. The occasional violent showers checked the course of the thermometer and hygrometer; and the minimum temperature noted, was that of the rain, rather than that of radiation to the sky. As a different barometer was necessarily used during the night, care was taken to continue its readings during the day, to obtain an accurate comparison with the standard instrument at the Assay Office. The difference—·017, has been added, to bring the whole to terms of the

\* See Analysis of Graphite, GLEANINGS, vol. III. p. 180.

standard, which I have reason to believe does not differ more than .010 (in defect) from the Royal Society's barometer.

The thermometers were all standards from NEWMAN'S, agreeing very closely together.

The diurnal tides for the two days are respectively 0.140 and 0.116, from the former of which must be deducted the gradual decrease of the pressure for 6 hours;  $732 - 663 \div 4 = .017$ , leaving  $0.123$ , and  $.116 + .123 \div 2 = 0.120$  is the mean, which is rather above the usual amount of tide for the month of September. The nocturnal tide from  $10\frac{1}{2}$  P. M. to  $4\frac{1}{2}$  A. M. is  $.700 - .607$  (with allowance for the half hours)  $= .083$ . The hours of maxima and minima correspond with those used in the registers of the Journal, and suggest the expediency of an alteration in those fixed for observation by Sir JOHN HERSCHEL, (see page 358.)

*Horary observations of the Barometer, Thermometer, and Hygrometer, made at Calcutta, from 6 A. M. of the 21st to 6 P. M. of the 22nd September, 1835.*

Hour 21st.	Baro- meter at 32°	Thermometer in the		Wet bulb therm.	wet bulb depres- sion.	Hair hy- grometer.	Rain.	Wind.	Weather.
		Air.	Under sky.						
A. M. 6	29.678	78.0	75.2	75.8	2.2			E.	Scud, cirri above.
7	.699	79.4		76.2	3.2			e.	do., increasing.
8	.715	80.0		76.5	3.5			o.	cumuli, clear above.
9	.725	81.8	80.0	76.8	5.0			e.	do.
10	.732	85.0	85.2	78.1	6.9			e.	cumuli.
11	.702	84.7	97.0	77.7	7.0	95		E.	do., fine.
noon.	.684	85.6	100.0	78.4	7.2	94		E.	do.
1	.656	86.0	96.2	78.3	7.7	93		e.	overcast.
2	.621	79.2	91.0	78.6	0.6	100		e.	hard shower, clear.
3	.592	83.1	102.4	78.8	4.3	97		e.	fair.
4	.592	82.2	88.2	78.6	3.6	97		e.	cloudy.
5	.595	82.3	85.7	78.7	3.6	97		e.	do.
6	.605	83.7	(rain.)	78.6	5.1			e.	cumuli, rain $6\frac{1}{2}$ p.m.
7	.646	78.5	74.0	76.8	1.7			o.	rain.
8	.657	79.7		77.5	2.2			e.	overcast.
9	.688	80.1		77.4	2.7			E.	do., clearing.
10	.696	79.5	76.8	76.5	3.0			e.	clear night.
11	.699	79.1		76.4	2.7		0.40	e.	do.
midnight.	.682	78.4		76.2	2.2			e.	do.
22nd. 1	.658	77.8		76.4	1.4			e.	do.
2	.653	77.6		76.4	1.2			e.	cloudy.
3	.636	77.7		76.5	1.2			e.	overcast.
4	.618	77.5	75.7	76.3	1.2			e.	do.
5	.621	77.7		76.8	1.1			E.	cum. stratus.
6	.643	77.7	76.8	76.4	1.3			E.	do., wet.
7	.646	78.3		76.5	1.8			E.	do.
8	.654	79.1		76.6	2.5			E.	do., clearing.
9	.662	80.3		77.1	3.2			E.	scud.
10	.663	83.0		78.1	4.9			E.	fine.
11	.647	83.9		79.6	4.2	96		E.	cumuli.
noon.	.620	83.4	93.0	77.4	6.0	94		E.	do.
1	.595	80.4	83.2	77.6	2.8	99		E.	rain, dull.
2	.568	81.5	88.4	77.5	4.0	98		E.	cumuli.
3	.544	81.5	85.8	77.5	4.0	98		E.	overcast.
4	.544	80.4	79.6	76.6	3.8	99		e.	hard rain.
5	.547	79.2	79.0	77.2	2.0	99		e.	do.
6	.574	× 77.6		75.7	1.9		0.60	E.	clearing.
Mean 1st 24hours,	29.6605	80.61		77.26	3.35		0.40	e by n	showery.
Mean 2d 24hours,	29.6317	79.58		76.96	2.62		0.60	e by s	ditto.